PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PB-47381	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/GB2004/005066	International filing date *(day/month/year)* 02.12.2004	Priority date *(day/month/year)* 23.12.2003
International Patent Classification (IPC) or national classification and IPC INV. B29D11/00 B29C37/00		
Applicant WARDROP, Fraser		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 10 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☐ *sent to the applicant and to the International Bureau)* a total of sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in celectronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☒	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☒	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
13.10.2005	28.03.2006
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Roberts, P Telephone No. +31 70 340-

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/GB2004/005066

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages	
1-14	as originally filed
Claims, Numbers	
1-10	as originally filed
Drawings, Sheets	
1/6-6/6	as originally filed

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
   - ☐ restricted the claims.
   - ☒ paid additional fees.
   - ☐ paid additional fees under protest.
   - ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

   ☐ complied with.

   ☒ not complied with for the following reasons:

   see separate sheet

4. Consequently, this report has been established in respect of the following parts of the international application:

   ☒ all parts.

   ☐ the parts relating to claims Nos. .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	3-10
	No:	Claims	1,2
Inventive step (IS)	Yes:	Claims	3-10
	No:	Claims	1,2
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations (Rule 70.7):

   see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item IV.

The separate inventions/groups of inventions are:

1-4
A method for releasing a lens by raising a pin which is located in a pallet and pressing with an annulus pressing means
5-7
A method for simultaneously processing lenses through a process station for release, inspection and transfer
8-10
A lens pallet including an anally movable pin

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The application concerns methods and devices during the manufacturing of lenses.

The reasons for which the present application has been deemed to contain 3 inventions which are not linked such that they form a single general inventive concept, as required by Rules 13.1, 13.2 and 13.3, PCT are as follows:

The prior art (D1) has been identified as: US 6558584 (cited by the applicant)

Invention I:

From a comparison of the disclosure of this prior art D1 and the technical features of claims 1, the features which are known from D1 (at col. 9, line 49-63; col.10, line 53-57, and figures 9a,9b) are the following:
A method for releasing a lens from an associated mold section in which the lens was formed and is adhered, the mold section having an optical surface on which the lens is formed, a non-optical surface located opposite the optical surface, an annular shoulder surrounding the optical surface, and an annular wall extending from the annular shoulder, said method comprising the steps (see e.g. title and fig. 1b) of:

a) providing an axially movable pin on which the mold section may rest with an upper surface of the pin contacting the non-optical surface of the mold section located opposite the lens (see pin 28 in fig. 9A);
b) raising the pin to a stationary position such that the annular wall of the mold section is not directly supported (see fig.9B where the wall is not supported);
c) providing a Lens release head having an annulus (see plate 58) ;
d) pressing the lens release head and annulus on top of the mold section within predetermined load parameters with the annulus engaging the upper shoulder of the mold section while the non-optical surface of the mold section remains seated on the raised stationary pin (see col. 9 lines 49-63 - the action of the pin 28 in contact with the non-optical surface of the mold causes a force, or pressing, between the mold and plate 58) ; whereby the mold section is deformed and the lens is released from the mold section (see col. 9 lines 61 and 62).

The extra features of claim 2 - wherein the lens release head movement and load parameters are controlled and programmed with a servo drive assembly- is a matter of general design which is well known .

from which analysis follows that the following technical features of claims 3 can be seen to make a contribution over this prior art (Special Technical Features (S.F.), (Rule 13.2 PCT)):

-the pin is located in a pallet that is moved along a conveyor, the pin being raised by an anvil having an upwardly sloping surface which the pin contacts and travels over as the pallet is moved beneath the lens release head.

From these S.F. the objective problem to be solved by the St. invention can be construed as:

to provide a method which would enable automation f the process

Invention 2

From a comparison of the disclosure of this prior art and the technical features of claim 5

the following features can be seen to make a contribution over this prior art (Special Technical Features (S.F.), (Rule 13.2 PCT)):

All the features of claim 5 except the existence of a first lens release sation and a third lens transfer substation

From these, the objective problem to be solved can be construed as:

to provide a process which reduces the time required for processing the contact lenses

Invention 3

From a comparison of the disclosure of this prior art and the technical features of claim 8 the following features can be seen to make a contribution over this prior art (Special Technical Features (S.F.), (Rule 13.2 PCT)):

an axially movable pin located in a respective nest and on which the respective mold section may rest and move therewith.

Further claim 8 does not comprise the feature of a lens release head having an annulus which is essential for carrying out the invention of te prior art and claim 1, i.e. releasing the lens from the lens mold, nor does it comprise the feature of an anvil which would act to raise the pin . The device of claim 8 as claimed could not, therefore, carry out the methods of claim 1 or of claim 3. Hence, claim 8 cannot be unitary with claims 1 or 3.

An the objective problem to be solved by the deice as claimed could :

to provide a lens pallet which would enable movement of mold sections

The above analysis shows that the special technical features of invention I are neither the

same as nor corresponding to those of invention II , nor the same as or corresponding to those of invention 3 (claims 8-10).

In conclusion, therefore, the 3 groups of claims are not linked by common or corresponding special technical features and define 3 different inventions not linked by a single general inventive concept.
The application, hence does not meet the requirements of Unity of Invention as defined in Rules 13.1 & 13.2 PCT.

Re Item V.

1 The following document is referred to in this communication:
D1 : US 6 558 584 B1 (O'NEILL TREVOR ET AL) 6 May 2003 (2003-05-06)
D1: US-A-6 113 817 (HERBRECHTSMEIER ET AL) 5 September 2000 (2000-09-05)
D2: EP-A-0 515 149 (BMC INDUSTRIES, INC) 25 November 1992 (1992-11-25)
D3: US 2003/160343 A1 (HODGKINSON MARK) 28 August 2003 (2003-08-28)
D4: US 2003/041449 A1 (PARNELL PHILLIP K ET AL) 6 March 2003 (2003-03-06)

2 INDEPENDENT CLAIM 1

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.
See Item IV above. Even if it could be argued that the pin, 28, of D1 was the means active to provide the pressing force rather than the lens release head and annulus then this would merely a simple reversal of roles of the features concerned and would result in exactly the same effect and result and so would involve a inventive step in accordance with Article 33(3) PCT.

2.2 DEPENDENT CLAIM 2

Dependent claim 2 does not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

2.3 DEPENDENT CLAIMS 3,4

Document D1, which is considered to represent the most relevant state of the art is discussed above (see Item IV).The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

The problem to be solved by this invention and solution to this problem as are also discussed in Item IV. The proposed solution enables automation of the process; this was not hinted or suggested in the prior art. Hence, claims 3,4 of the present application are considered as involving an inventive step (Article 33(3) PCT).

3 INDEPENDENT CLAIM 5

3.1 Document D2, which is considered to represent the most relevant state of the art.

D2 discloses: a method for simultaneously processing first, second and third lenses through a process station having a first lens release substation [see claim 1 step (g)] , a second lens inspection substation [see claim 2] , and a third lens transfer substation [see claim 1 step (h)]

D2 does not disclose: said method comprising the steps of:

a) providing a lens release substation, a lens inspection substation and a lens deposit substation in an annular array approximately 120° apart;

b) providing first, second and third lens pick and place fingers mounted to a rotatable plate approximately 120° apart and positioned above the lens release substation, lens inspection substation and lens transfer substation, respectively;

whereby the rotatable plate rotates at 120° increments and thereby presents the first, second and third pick and place fingers through a cycle wherein each pick and place finger is sequentially moved from the first substation to the second substation and lastly to the third substation and whereby the cycle may be continuously

repeated in an automated manner.

The subject-matter of claim 5 is therefore novel (Article 33(2) PCT).
The problem to be solved by this invention and solution to this problem as are also discussed in Item IV. The proposed solution enables a process which reduces the time required for processing the contact lenses : this was not hinted or suggested in the prior art. Hence, claim 5 of the present application is considered as involving an inventive step (Article 33(3) PCT).

3.2 Claims 6,7 are dependent on claim 5 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3.3 Similar arguments apply to D3.

4 INDEPENDENT CLAIM 8

4.1 Document D4 which is considered to represent the most relevant state of the art.

D4 discloses : A lens pallet having one or more mold section nests configured to accept a respective mold section therein,

D4 does not disclose: said pallet further including an axially movable pin located in a respective nest and on which the respective mold section may rest and move therewith.

The subject-matter of claim 8 is therefore novel (Article 33(2) PCT).

The problem to be solved by this invention and solution to this problem are also discussed in Item IV. The proposed solution provides a lens pallet which would enable movement of mold sections: this was not hinted or suggested in the prior art. Hence, claim 8 of the present application is considered as involving an inventive step (Article 33(3) PCT).

3.2 Claims 10,11 are dependent on claim 8 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3.3 Similar arguments apply to D5.

Re Item VII

Independent claim 8 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D4) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D5 are not mentioned in the description, nor are these documents identified therein.